

Amendments to the Claims

Please cancel Claims 2, 3, 13 and 14 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 1, 4-12 and 15-22 to read as follows.

1. (Currently amended) An inkjet printing method using a printing head having a plurality of nozzles capable of ejecting ink for printing an image by ejecting ink based on printing data which instructing instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, wherein

said the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection is added to the printing data corresponding to a neighboring nozzle of the abnormal nozzle,

when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle, and the printing data corresponding to the N-th abnormal nozzle is alternately added to the printing data corresponding to the (N-M)-th neighboring nozzle and the

(N+M)-th neighboring nozzle every time the printing data corresponding to the N-th abnormal nozzle is present.

Claims 2 and 3 (cancelled)

4. (Currently amended) An inkjet printing method ~~as claimed in claim 2~~ using a printing head having a plurality of nozzles capable of ejecting ink for printing an image by ejecting ink based on printing data which instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, wherein

the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection is added to the printing data corresponding to a neighboring nozzle of the abnormal nozzle,

when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle,

the printing data corresponding to the N-th abnormal nozzle is added to the printing data corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle, and

a ratio of the printing data corresponding to the N-th abnormal nozzle to be added to the printing data corresponding to the (N-M)-th neighboring nozzles nozzle and the (N+M)-th neighboring nozzle is determined based on states which are responsive to the ink-ejection property of the (N-M) th neighboring nozzles nozzle and the (N+M) neighboring nozzle.

5. (Currently amended) An inkjet printing method as claimed in claim 4, wherein

~~said the~~ states of the neighboring nozzles are obtained from ~~a shooting~~ ejection information based on a landing result results of ink ejected ~~out of~~ from the neighboring nozzle nozzles on a printing medium.

6. (Currently amended) An inkjet printing method as claimed in claim 5, wherein

~~said shooting the ejection~~ information includes at least one of information about the landing position positions of ink on the printing medium and the diameter diameters of dot dots formed by ink landed on the printing medium.

7. (Currently amended) An inkjet printing method as claimed in claim 1, wherein, using a printing head having a plurality of nozzles capable of ejecting ink for printing an image by ejecting ink based on printing data which instructs ejection or

non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, wherein

the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection is added to the printing data corresponding to a neighboring nozzle of the abnormal nozzle,

when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle, and

when the printing data corresponding to the N-th abnormal nozzle is added to that corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle, a printing resolution of the printing head is improved.

8. (Currently amended) An inkjet printing method as claimed in claim 1, wherein

an image is completely printed in a predetermined area of the a printing medium by a single movement of the printing head relative to the printing medium while ink is being ejected out of the nozzle nozzles of the printing head based on the printing data.

9. (Currently amended) An inkjet printing method as claimed in claim 1, wherein

an image is completely printed in a predetermined area of ~~the a~~ printing medium by ~~moving~~ a single movement of a single printing head relative to the printing medium while ink is ~~being~~ ejected from ~~nozzle~~ the nozzles of the single printing head based on the printing data.

10. (Currently amended) An inkjet printing method as claimed in claim 1, wherein

~~said~~ the manner of adding the printing data corresponding to the abnormal nozzle to that corresponding to the neighboring ~~nozzle~~ nozzles is varied depending upon a type of printing medium.

11. (Currently amended) An inkjet printing method as claimed in claim 1, further comprising the steps of:

printing a detection pattern on a printing medium by using the printing head, the detection pattern being for use in detecting the state of the ~~nozzle~~ nozzles; and
detecting the abnormal nozzle based on the detection pattern printed on the printing medium.

12. (Currently amended) An inkjet printing apparatus for printing an image by use of a printing head having a plurality of nozzles capable of ejecting ink and by

ejecting ink out of the nozzles based on printing data which ~~instructing~~ instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, comprising:

compensation means for adding the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection state ink-ejection to the printing data corresponding to a neighboring nozzle arranged in the neighborhood of the abnormal nozzle,

wherein when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle, and

the printing data corresponding to the N-th abnormal nozzle is alternately added to the printing data corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle every time the printing data corresponding to the N-th abnormal nozzle is present.

Claims 13 and 14 (cancelled)

15. (Currently amended) An inkjet printing apparatus ~~as claimed in claim 13, wherein~~ using a printing head having a plurality of nozzles capable of ejecting

ink for printing an image by ejecting ink based on printing data which instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, comprising:

compensation means for adding the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection to the printing data corresponding to a neighboring nozzle of the abnormal nozzle,

wherein when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle,

the printing data corresponding to the N-th abnormal nozzle is added to the printing data corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle, and

said compensation means determines a ratio of the printing data corresponding to the N-th abnormal nozzle to be added to the printing data corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle based on states which are responsive to the ink-ejection property of the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle.

16. (Currently amended) An inkjet printing apparatus as claimed in claim 15, wherein

~~said the~~ states of the neighboring nozzles are obtained from ~~the shooting ejection~~ information of ink ejected ~~out of~~ ~~from~~ the neighboring nozzles and landed on a printing medium.

17. (Currently amended) An inkjet printing apparatus as claimed in claim 16, wherein

~~said shooting the ejection~~ information includes at least one of data about the landing position ~~positions~~ of ink on the printing medium and the ~~diameter~~ ~~diameters~~ of ~~dot~~ ~~dots~~ formed by ink landed on the printing medium.

18. (Currently amended) An inkjet printing apparatus ~~as claimed in claim 12, further comprising:~~ using a printing head having a plurality of nozzles capable of ejecting ink for printing an image by ejecting ink based on printing data which instructs ejection or non-ejection of ink, the plurality of nozzles being aligned next to each other along a predetermined direction, comprising:

compensation means for adding the printing data corresponding to an abnormal nozzle malfunctioning in ink-ejection to the printing data corresponding to a neighboring nozzle of the abnormal nozzle, wherein when an N-th nozzle of the plurality of nozzles is an abnormal nozzle, a neighboring printing area neighboring a printing area to be printed by the N-th abnormal nozzle is printed by using an (N-M)-th neighboring nozzle

and an (N+M)-th neighboring nozzle (where N and M are positive integers) arranged in the neighborhood of the N-th abnormal nozzle based on the printing data corresponding to the N-th abnormal nozzle; and

means for improving a printing resolution of the printing head when the printing data corresponding to the N-th abnormal nozzle is added to that corresponding to the (N-M)-th neighboring nozzle and the (N+M)-th neighboring nozzle.

19. (Currently amended) An inkjet printing apparatus as claimed in claim 12, further comprising:

means for completely printing an image in a predetermined area on the a printing medium by a single movement of the printing head relative to the printing medium while ink is being ejected from the nozzles of the printing head based on the printing data.

20. (Currently amended) An inkjet printing apparatus as claimed in claim 12, further comprising:

means for completely printing an image in a predetermined area on the a printing medium by moving a single movement of a single printing head relative to the printing medium while ink is being ejected from the nozzles of the single printing head based on the printing data.

21. (Currently amended) An inkjet printing apparatus as claimed in claim 12, wherein

said compensation means ~~add~~ adds the printing data corresponding to the abnormal nozzle to that corresponding to the neighboring ~~nozzle~~ nozzles in a different manner depending upon ~~the a~~ type of ~~the~~ printing medium.

22. (Currently amended) An inkjet printing apparatus as claimed in claim 12, further comprising:

control means for printing a detection pattern on a printing medium by using the printing head, ~~the detection pattern being for use in~~ detecting the state of the ~~nozzle~~ nozzles, and

detection means for detecting the abnormal nozzle based on the detection pattern printed on the printing medium.